

ABSTRACT

A multiplexing control system has a common process input/output unit for distributing process signals from sensors for measuring the same state variable of a process to digital controllers. One process input/output unit for inputting/outputting a process signal between the multiplexing control system and plant is provided for each process signal. The process input/output unit for the process signal of high importance is triplexed. A process controller having an operating function is provided to each of the triplexed process input/output units. A process input/output unit for the process signal of intermediate importance is diplexed. A process input/output unit for the process signal of low importance is monoplexed. The process signals of the diplexed process input/output units and the monoplexed process input/output unit are controlled by a controller having a master right among the process controllers.